

SECTION 01700
CONTRACT CLOSEOUT
PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

Work Included: This section specifies administrative and procedural requirements for project closeout, including, but not limited to, the following:

1. Inspection and testing procedures.
2. Project record documents.
3. Operating and maintenance manuals.
4. Warranties.
5. Training of Owner's personnel
6. Asset management information delivery and asset tagging
7. Final cleaning.

Closeout requirements for specific construction activities and special cleaning requirements for products are included in the appropriate sections in Division 2 through 16.

1.2 SUBSTANTIAL COMPLETION

- A. Before requesting inspection for certification of Substantial Completion, complete the following:

1. Prepare a list of incomplete items or items requiring correction, the value of items on that list, and reasons the work is not complete.
2. Advise Owner of pending insurance change-over requirements.
3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents. Provide warranty bonds (if required) for building and special systems including, but not limited to, landscaping, structural painting, escalators, elevators, mechanical, electrical, train control, communication systems and other construction systems.
4. Obtain and submit releases providing the Owner unrestricted use of the work and access to services and utilities; include occupancy permits,

5. Submit Record Documents including but not limited to As-Built Drawings, operations and maintenance manuals, final project photographs, models, damage or settlement survey, property survey, and similar final record information with corresponding unique asset identifiers (Asset ID), as applicable, clearly labeled on each document.
 6. Deliver tools, spare parts, extra stock, and similar items to location(s) designated by Owner. Label with manufacturer's name and model number where applicable.
 7. Submit the asset management information and documentation required for all assets and confirm that each asset has an Asset Tag installed as required by the Contract Documents.
 8. Make final change-over of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of change-over in security provisions.
 9. Complete start-up testing of systems.
 10. Submit testing, adjusting and balancing records with corresponding unique asset identifiers (Asset ID), as applicable, clearly labeled on each document.
 11. Complete training of the Owner's operating and maintenance personnel as described in the technical specifications.
 12. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements unless indicated otherwise by the Owner.
 13. Advise Owner of changeover of responsibility for payment of utilities.
 14. Provide Occupancy Permits.
 15. Complete final clean-up requirements, including touch-up painting. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
 16. Complete de-mobilization from, and restoration of all facilities. This includes the removal of temporary facilities, material and debris removal, grading, permanent restoration of fencing and barriers, and removal of contractor locks from doors and gates.
- B. The Contractor shall provide written certification to the Owner when it believes the work is Substantially Completed. Along with said written certification, the Contractor shall provide the Owner with the Contractor's

written list of incomplete and non-conforming items/work and a schedule for the completion or correction of such items/work.

- C. Inspection Procedures: Within 21 days of the Owner's receipt of the Contractor's written certification and written list of incomplete and non-conforming work and completion/correction schedule, the Owner shall inspect the Work, and provide the Contractor either a written declaration that the Work has been substantially completed or an itemized list of incomplete and unsatisfactory Work items required by the Contract sufficient to demonstrate that the Work has not been substantially completed. The Owner will either proceed with inspection or advise the Contractor of Incomplete requirements.
- D. The Owner will repeat inspection when requested and assured that the work has been substantially completed.
- E. Results of the completed inspection will form the basis of requirements for Final Acceptance.
- F. Once the Owner determines that Substantial Completion has been achieved, it will provide the Contractor written notice of Substantial Completion and a punch list of items which shall be completed by the Contractor prior to Final Acceptance.
- G. The date of Substantial Completion shall be that date identified in the Owner's written notice of Substantial Completion.
- H. The date that the notice of Substantial Completion and the punch list are transmitted to the Contractor will be used to establish the time period under which the Contractor is obligated to correct defective work and complete punch list items.

1.3 FINAL ACCEPTANCE

- A. Prior to Final Acceptance the Contractor shall:
 - 1. Complete all Work, including all items on all punch lists, to the satisfaction of the Owner;
 - 2. Submit and obtain the Owner's approval of all "Record Documents", warranty documents and all other required submittals; and
 - 3. Address all non-conformance reports to the Owner's satisfaction.
- B. Preliminary Procedures: Before requesting final inspection for certification of Final Acceptance (Final Acceptance inspection), complete the following.
 - 1. Submit a certified copy of the Owner's final inspection list of items to be

completed or corrected, stating that each item has been endorsed and dated by the Owner.

2. Submit pest-control final inspection report and warranty.
 3. Submit consent of surety to final payment.
 4. Submit evidence of final, continuing insurance coverage complying with Agency requirements.
 5. Submit all changes to the DBE percentage over the life of the Contract in writing listing all of the change items and their values along with the corresponding change in DBE value.
- C. The Contractor cannot request a Final Acceptance inspection before it has received notice of Substantial Completion. Further, "Record Documents" shall be submitted by the Contractor and approved by the Owner before the Final Acceptance inspection will take place. The Contractor shall notify the Owner in writing when the work is ready to be inspected for Final Acceptance. Thereafter, the Owner will arrange for a Final Acceptance inspection or will notify Contractor of unfulfilled requirements.
- D. Reinspection Procedure: The Owner will reinspect the work upon receipt of notice that the work, including inspection list items from earlier inspections, has been completed.
- E. Upon completion of reinspection, the Owner will prepare a Certificate of Final Acceptance, or advise the Contractor of work that is incomplete or of obligations that have not been fulfilled but are required for that Final Acceptance.
- F. If necessary, reinspection will be repeated.
- G. Once Final Acceptance has been achieved, the Owner will issue a Certificate of Final Acceptance to the Contractor.
- H. Neither Final Acceptance nor the Owner's issuance of a Certificate of Final Acceptance shall constitute a waiver by the Owner of any rights it may have against the Contractor or others, in law, equity or otherwise.
- I. The date of Final Acceptance will be the date used to establish warranty periods, unless otherwise provided for in the Contract Documents.

1.4 AS-BUILT DRAWINGS

- A. The Owner will provide one set of drawings to the Contractor to maintain and submit as As-Built Drawings. Maintain these prints at the site and at all times, absolutely, clearly, and completely show the actual installations in accordance with the Contract requirements. Record all subcontractors' changes. At the

start of construction, the Owner will forward an AutoCAD copy of the contract drawings to the Contractor for use its use to prepare project As-Built Drawings. During the course of construction, drawing clarifications for Requests for Information, submittals, nonconformance reports, value engineering, variations for its means and methods and other Contractor initiated changes will be made by the Contractor.

- B. During the course of construction, the Owner, may elect to have the designer revise certain AutoCAD drawings and issue these to the Contractor. All As-Built drawings remain the responsibility of the Contractor. The Contractor shall use the revised designer drawings and update with any As-Built changes.
- C. The Contractor shall maintain a hard copy and electronic set of As-Built Drawings at the Contractor's field office. Red lined, hand marked hard copies shall be available immediately after the start of installation if this information is not yet entered into the AutoCAD files. As a minimum, transfer all entries/revisions from the hard copy set to AutoCAD files by the end of each month. All entries shall be dated and attention called to each entry by a "cloud" drawn around the area affected. Maintain a log of entries/revisions made. The As-Built Drawings shall be at all times, to absolutely, clearly, and completely show the actual installations in accordance with the Contract requirements. The Contractor shall record all subcontractors' changes.
- D. Upon completion of the Work and after checking the subcontractors' As-Built Drawings, and all required drawings, submit a complete set of marked-up record drawings to the Owner in time to be used for the final inspection, and acceptance and for verification by the designer. Submittal and acceptance of As-Built drawings through Substantial Completion shall be a prerequisite to scheduling a final inspection of the Contract and these drawings and the Contract Documents will be used in checking completion of the Work. Nonavailability of As-Built Drawings or inaccuracies therein may be grounds for cancellation and postponement of any scheduled final inspection by the Owner until such time as the drawings are available or the discrepancy has been corrected. Upon completion of the work, the As-Built drawings shall become the property of the Owner. If As-Built Drawings are not maintained as required herein to the satisfaction of the Owner, the Owner will deduct from monthly partial payments, an amount representing the estimated monthly cost of maintaining the As-Built drawings, and in addition will continue deduction of the standard 5 percent retainage after 50 percent completion of the Contract, as provided in Section 01151 MEASUREMENT AND PAYMENT. In addition, the Owner may retain a sufficient amount for the cost of a third party to finalize As-Built documents.
- E. The Contractor shall incorporate changes into the electronic as-built files on a contemporaneous basis and submit to the Owner, three (3) complete copies of electronic, as-built plans of all work installed, relocated or abandoned. The as-built plans shall clearly label all assets with reference to their unique Asset ID. The as-built plans shall be prepared and submitted in electronic

format (PDF format and as an AutoCAD drawing) in a compact disc (CD), DVD or storage device acceptable the Owner. Electronic as-built files shall be submitted at approximately 30% completion, Substantial Completion, and 30 days after Final Completion and shall conform, where applicable, to the requirements of Section 01300. Electronic as-built files must be submitted and approved by the Owner before final payment will be issued.

1.5 CLOSEOUT PLAN

- A. The Closeout Plan shall be the Contractor's approach for handling closeout of the project including:
 - 1. Schedule - including meetings, field inspection walkthroughs, submittals, instruction of Owner personnel, and other relevant closeout activities
 - 2. Log identifying all closeout deliverables - including columns for Specification section reference, description of requirements, Project Website filename, and any other relevant information
 - 3. Identification of Contractor closeout responsibilities
- B. The Closeout plan shall be submitted to the Owner within 60 days of Notice To Proceed and be updated as required.
- C. The execution of the Closeout plan by the Contractor will be monitored by the Owner. The Contractor shall update the status of the Closeout plan as required by the Owner.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.1 DEMONSTRATION AND TRAINING

- A. Operating and Maintenance Instruction: Instruct Owner's personnel to operate, adjust, and maintain systems, subsystems and stand-alone equipment not part of a system. Provide instructors experienced in operation and maintenance procedures. Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance at each location. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Provide instruction at mutually-agreed-on times. For equipment that requires seasonal operation, provide similar instruction at the

start of each season. Schedule training with Owner providing at least fourteen days advanced notice.

- B. Instruction for operating equipment shall include, but not be limited to, the following:
1. System design and operating requirements review.
 2. Document review, including operation and maintenance manuals and as-built documents.
 3. Operations review, including:
 - a. Safety procedures.
 - b. Hazards.
 - c. Control sequences
 - d. Startup
 - e. Shutdown
 - f. Emergency operations
 4. Adjustments, including those for noise, vibration economy, and energy efficiency.
 5. Troubleshooting
 6. Maintenance, including:
 - a. Safety procedures.
 - b. Hazards.
 - c. Spare parts and materials.
 - d. Tools.
 - e. Lubricants.
 - f. Fuels.
 - g. Cleaning.
 - h. Warranties.
 - i. Maintenance agreements and similar continuing commitments.
 7. Repairs

3.2 FINAL CLEANING

- A. General: General cleaning during construction is required by the Contract Documents (See Section-01560 TEMPORARY CONTROLS). Provide a final cleaning, with cleaning and waste removal activities to be conducted in compliance with local laws and ordinances and federal environmental regulations.
- B. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion.
 - a. Remove labels that are not permanent labels.
 - b. Clean transparent materials, including mirrors and glass in doors and windows, of glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - c. Touch up and otherwise repair and restore marred, exposed finishes and surfaces, replacing those that cannot be satisfactorily repaired or that evidence repair or restoration.
 - d. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean in unoccupied spaces. Vacuum carpeted surfaces. Shampoo if visible soil or stains remain.
 - e. Remove debris and surface dust from limited access spaces, including roofs, plenums, ducts, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - f. Replace disposable air filters or clean permanent air filters. Clean diffusers, registers and grilles.
 - g. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication, paint and mortar droppings, and other substances. Clean plumbing fixtures to a sanitary and stain-free condition. Clean light fixtures and lamps. Replace burned out or dimmed bulbs and replace noisy starters.
 - h. Clean the site, including landscape development and yard areas, removing rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, even-textured surface. Remove tools, construction equipment, machinery and surplus materials from site. Remove snow and ice to provide safe access to building.
 - i. Leave site and facilities clean and ready for occupancy.

C. Pest Control: The exterminator shall make a final inspection and rid the

Project of rodents, insects and other pests.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT AND PAYMENT

Separate measurement and payment will not be made for the work of this section. All costs in connection with this section are included in the contract price as identified in Section 01151- MEASUREMENT AND PAYMENT

END OF SECTION